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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s): Carlos F. Barbas, III et al. )  
Application No. 10/078,757 ) NOW U.S. Patent No. 7,087,409 B2  
Filed: February 19, 2002 ) Granted: August 8, 2006  
For: HUMANIZATION OF MURINE )  
ANTIBODY ) Attorney Docket No. TSRI 598.0 Con.1

**REQUEST FOR CERTIFICATE OF CORRECTION**

Attention: Certificate of Correction Branch  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

**Certificate**  
**NOV 24 2006**  
**of Correction**

United States Letters Patent No. 7,087,409 B2 was granted to Carlos F. Barbas, III and Christoph Rader on August 8, 2006, on the basis of the above application, and is assigned to The Scripps Research Institute. A number of printing errors were made by the Patent and Trademark Office during printing as summarized on the enclosed Patent Office Form PTO/SB/44 (37 pp.).

With regard to the error noted in Claim 1 (Column 44) please refer to the Examiner's Amendment, a copy of which is also enclosed herewith.

With regard to the Sequence Listing (depicted at Columns 21-44), a Replacement Sequence Listing was filed on February 2, 2006; however, the patent is printed with what appears to be the Sequence Listing as originally filed. Accordingly, the Replacement Sequence Listing is reproduced in full on the aforementioned Form PTO/SB/44.

It is requested that a Certificate of Correction be issued embodying the enclosed corrections.

Respectfully submitted,

Date: November 17, 2006

By Talivaldis Cepuritis  
Talivaldis Cepuritis (Reg. No. 20,818)

OLSON & HIERL, LTD.  
20 N. Wacker Drive  
36th Floor  
Chicago, Illinois 60606  
(312) 580-1180

NOV 27 2006

### EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Talivaldis Cepuritis on 05 January 2006.

This application has been amended as follows:

At the end of the claim 1, the term "whole antibody." has been deleted and is replaced by the phrase "whole antibody; wherein said preselected antigen is the same antigen recognized by the mouse monoclonal antibody".

At the end of the claim 5, the term "preselected antigen." has been deleted and is replaced by the phrase "preselected antigen; wherein said preselected antigen is the same antigen recognized by the mouse monoclonal antibody".

### EXAMINER'S COMMENT

3. Support for the above Examiner's amendment can be found in the specification as filed at pages 25-26 and 31-36, which discloses the humanization of mouse monoclonal antibody LM609 by the presently claimed process wherein the humanized versions of the LM609 monoclonal antibody retain the antigen specificity of mouse monoclonal antibody LM609, i.e., human integrin  $\alpha_v\beta_3$ .

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PATENT NO. : 7,087,409 B2  
APPLICATION NO.: 10/078,757  
ISSUE DATE : August 8, 2006  
INVENTOR(S) : Carlos F. Barbas, III et al.

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Column 6,  
Line 11, "Tbr14" should be -- Thr14 --.

Column 8,  
Line 2, "LCDR2" should be -- LCDR1 --.  
Line 31, " $\gamma_5$ " should be --  $\beta_5$  --.

Column 9,  
Line 24, "FL2" should be -- FR2 --.  
Line 57, "HR 9537" should be -- HB 9537 --.

Column 44,  
Lines 27-29, "wherein said humanized mouse monoclonal antibody binds the same antigen as the mouse monoclonal antibody." should be -- wherein said preselected antigen is the same antigen recognized by the mouse monoclonal antibody. --.

Sequence Listing:  
The Sequence Listing depicted at Columns 21-44 should read as follows:

### SEQUENCE LISTING

<160> NUMBER OF SEQUENCE ID NOS: 122  
<210> SEQ ID NO 1  
<211> LENGTH: 8  
<212> TYPE: PRT  
<213> ORGANISM: Mus Musculus

MAILING ADDRESS OF SENDER (Please do not use customer number below):

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ISSUE DATE : August 8, 2006  
INVENTOR(S) : Carlos F. Barbas, III et al.

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

<400> SEQUENCE: 1  
His Asn Tyr Gly Ser Phe Ala Tyr  
1 5

<210> SEQ ID NO 2  
<211> LENGTH: 9  
<212> TYPE: PRT  
<213> ORGANISM: Mus Musculus

<400> SEQUENCE: 2  
Gln Gln Ser Asn Ser Trp Pro His Thr  
1 5

<210> SEQ ID NO 3  
<211> LENGTH: 37  
<212> TYPE: DNA  
<213> ORGANISM: Homo Sapiens

<400> SEQUENCE: 3  
gggcccaggc ggccgagctc cagatgaccc agtctcc 37

<210> SEQ ID NO 4  
<211> LENGTH: 37  
<212> TYPE: DNA  
<213> ORGANISM: Homo Sapiens

<400> SEQUENCE: 4  
gggcccaggc ggccgagctc gtgatgacgc agtctcc 37

<210> SEQ ID NO 5  
<211> LENGTH: 37  
<212> TYPE: DNA  
<213> ORGANISM: Homo Sapiens

<400> SEQUENCE: 5  
gggcccaggc ggccgagctc gtgwtgacrc agtctcc 37

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INVENTOR(S) : Carlos F. Barbas, III et al.

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

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<210> SEQ ID NO 6
<211> LENGTH: 37
<212> TYPE: DNA
<213> ORGANISM: Homo Sapiens

<400> SEQUENCE: 6
gggcccaggc ggccgagctc acactcacgc agtctcc 37

<210> SEQ ID NO 7
<211> LENGTH: 23
<212> TYPE: DNA
<213> ORGANISM: Homo Sapiens

<400> SEQUENCE: 7
cagtaataca ctgcaaaatc ttc 23

<210> SEQ ID NO 8
<211> LENGTH: 23
<212> TYPE: DNA
<213> ORGANISM: Homo Sapiens

<400> SEQUENCE: 8
cagtaataaaa cccaacatc ctc 23

<210> SEQ ID NO 9
<211> LENGTH: 40
<212> TYPE: DNA
<213> ORGANISM: Homo Sapiens

<400> SEQUENCE: 9
gggcccaggc ggccgagctc gtggtgacgc agccgccttc 40

<210> SEQ ID NO 10
<211> LENGTH: 40
<212> TYPE: DNA
<213> ORGANISM: Homo Sapiens

<400> SEQUENCE: 10
gggcccaggc ggccgagctc gtgctgactc agccaccctc 40
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```
<210> SEQ ID NO 11
<211> LENGTH: 43
<212> TYPE: DNA
<213> ORGANISM: Homo Sapiens

<400> SEQUENCE: 11
gggcccaggc ggccgagctc gcctgactc agcctccctc cgt      43

<210> SEQ ID NO 12
<211> LENGTH: 46
<212> TYPE: DNA
<213> ORGANISM: Homo Sapiens

<400> SEQUENCE: 12
gggcccaggc ggccgagctc gagctgactc agccaccctc agtgctc      46

<210> SEQ ID NO 13
<211> LENGTH: 40
<212> TYPE: DNA
<213> ORGANISM: Homo Sapiens

<400> SEQUENCE: 13
gggcccaggc ggccgagctc gtgctgactc aatcgccctc      40

<210> SEQ ID NO 14
<211> LENGTH: 40
<212> TYPE: DNA
<213> ORGANISM: Homo Sapiens

<400> SEQUENCE: 14
gggcccaggc ggccgagctc atgctgactc agccccactc      40

<210> SEQ ID NO 15
<211> LENGTH: 40
<212> TYPE: DNA
<213> ORGANISM: Homo Sapiens

<400> SEQUENCE: 15
gggcccaggc ggccgagctc gggcagactc agcagctctc      40
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It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

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<210> SEQ ID NO 16
<211> LENGTH: 40
<212> TYPE: DNA
<213> ORGANISM: Homo Sapiens

<400> SEQUENCE: 16
gggcccaggc ggccgagctc gtggtgacyc aggagccmtc 40

<210> SEQ ID NO 17
<211> LENGTH: 40
<212> TYPE: DNA
<213> ORGANISM: Homo Sapiens

<400> SEQUENCE: 17
gggcccaggc ggccgagctc gtgctgactc agccaccttc 40

<210> SEQ ID NO 18
<211> LENGTH: 21
<212> TYPE: DNA
<213> ORGANISM: Homo Sapiens

<400> SEQUENCE: 18
gcagtaataa tcagcctcrt c 21

<210> SEQ ID NO 19
<211> LENGTH: 44
<212> TYPE: DNA
<213> ORGANISM: Homo Sapiens

<400> SEQUENCE: 19
gctgcccac cagccatggc ccaggtgcag ctggtgcagt ctgg 44

<210> SEQ ID NO 20
<211> LENGTH: 44
<212> TYPE: DNA
<213> ORGANISM: Homo Sapiens

<400> SEQUENCE: 20
gctgcccac cagccatggc ccagatcacc ttgaaggagt ctgg 44
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INVENTOR(S) : Carlos F. Barbas, III et al.

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

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<210> SEQ ID NO 21
<211> LENGTH: 44
<212> TYPE: DNA
<213> ORGANISM: Homo Sapiens

<400> SEQUENCE: 21
gctgccaac cagccatggc cgaggtgcag ctggtgsagt ctgg      44

<210> SEQ ID NO 22
<211> LENGTH: 44
<212> TYPE: DNA
<213> ORGANISM: Homo Sapiens

<400> SEQUENCE: 22
gctgccaac cagccatggc ccaggtgcag ctgcaggagt cggg      44

<210> SEQ ID NO 23
<211> LENGTH: 24
<212> TYPE: DNA
<213> ORGANISM: Homo Sapiens

<400> SEQUENCE: 23
cgcacagtaa tacacggccg tgtc      24

<210> SEQ ID NO 24
<211> LENGTH: 21
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence

<220> FEATURE:
<223> OTHER INFORMATION: PCR Primer for PelB Leader Sequence

<400> SEQUENCE: 24
acctattgcc tacggcagcc g      21

<210> SEQ ID NO 25
<211> LENGTH: 24
<212> TYPE: DNA
<213> ORGANISM: Homo Sapiens
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INVENTOR(S) : Carlos F. Barbas, III et al.

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

<400> SEQUENCE: 25  
cgcacagtaa tacacggcgcg tgtc 24

<210> SEQ ID NO 26  
<211> LENGTH: 8  
<212> TYPE: PRT  
<213> ORGANISM: Homo Sapiens

<400> SEQUENCE: 26  
Asp Thr Ala Val Tyr Tyr Cys Ala  
1 5

<210> SEQ ID NO 27  
<211> LENGTH: 8  
<212> TYPE: PRT  
<213> ORGANISM: Mus Musculus

<400> SEQUENCE: 27  
Asp Thr Ala Met Tyr Tyr Cys Ala  
1 5

<210> SEQ ID NO 28  
<211> LENGTH: 69  
<212> TYPE: DNA  
<213> ORGANISM: Artificial Sequence

<220> FEATURE:  
<223> OTHER INFORMATION: Synthetic PCR Primer

<400> SEQUENCE: 28  
gacacggcgcg tgtattactg tgcgcgtcat aactacggca gttttgctta ctggggccag 60  
ggaaccctg 69

<210> SEQ ID NO 29  
<211> LENGTH: 42  
<212> TYPE: DNA  
<213> ORGANISM: Artificial Sequence

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<220> FEATURE:
<223> OTHER INFORMATION: Synthetic PCR Primer

<400> SEQUENCE: 29
gaggaggagg aggagactag tttgtcaca agatttgggc tc 42

<210> SEQ ID NO 30
<211> LENGTH: 73
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence

<220> FEATURE:
<223> OTHER INFORMATION: Synthetic PCR Primer

<400> SEQUENCE: 30
gaagattttg cagtgtatta ctgccaaca gagtaacagc tggcctcaca cgtttgccca 60
ggggaccaag ctg 73

<210> SEQ ID NO 31
<211> LENGTH: 21
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence

<220> FEATURE:
<223> OTHER INFORMATION: Synthetic PCR Primer

<400> SEQUENCE: 31
aatacgactc actatagggc g 21

<210> SEQ ID NO 32
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence

<220> FEATURE:
<223> OTHER INFORMATION: Synthetic PCR Primer

<400> SEQUENCE: 32
gaggatgttg gggtttatta ctgccaacag agtaacagct ggcctcacac gtttggccag 60
gggaccaagc tg 72
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INVENTOR(S) : Carlos F. Barbas, III et al.

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

<210> SEQ ID NO 33  
<211> LENGTH: 8  
<212> TYPE: PRT  
<213> ORGANISM: Homo Sapiens

<400> SEQUENCE: 33  
Glu Asp Phe Ala Val Tyr Tyr Cys  
1 5

<210> SEQ ID NO 34  
<211> LENGTH: 8  
<212> TYPE: PRT  
<213> ORGANISM: Homo Sapiens

<400> SEQUENCE: 34  
Glu Asp Val Gly Val Tyr Tyr Cys  
1 5

<210> SEQ ID NO 35  
<211> LENGTH: 69  
<212> TYPE: DNA  
<213> ORGANISM: Artificial Sequence

<220> FEATURE:  
<223> OTHER INFORMATION: Synthetic PCR Primer

<400> SEQUENCE: 35  
gaygaggctg attattactg ccaacagagt aacagctggc ctcacacgtt cggcggaggg 60  
accaagctg 69

<210> SEQ ID NO 36  
<211> LENGTH: 50  
<212> TYPE: DNA  
<213> ORGANISM: Artificial Sequence

<220> FEATURE:  
<223> OTHER INFORMATION: Synthetic PCR Primer

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<400> SEQUENCE: 36
agagagagag agagagagag cgccgtctag aattatgaac attctgtagg      50

<210> SEQ ID NO 37
<211> LENGTH: 7
<212> TYPE: PRT
<213> ORGANISM: Homo Sapiens

<400> SEQUENCE: 37
Asp Glu Ala Asp Tyr Tyr Cys
1              5

<210> SEQ ID NO 38
<211> LENGTH: 7
<212> TYPE: PRT
<213> ORGANISM: Homo Sapiens

<400> SEQUENCE: 38
Phe Gly Gly Gly Thr Lys Leu
1              5

<210> SEQ ID NO 39
<211> LENGTH: 22
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence

<220> FEATURE:
<223> OTHER INFORMATION: Synthetic PCR Primer

<400> SEQUENCE: 39
aagacagcta tcgcgattgc ag      22

<210> SEQ ID NO 40
<211> LENGTH: 41
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
```

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## UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

Page 11 of 37

PATENT NO. : 7,087,409 B2  
APPLICATION NO.: 10/078,757  
ISSUE DATE : August 8, 2006  
INVENTOR(S) : Carlos F. Barbas, III et al.

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

```
<220> FEATURE:
<223> OTHER INFORMATION: Synthetic PCR Primer

<400> SEQUENCE: 40
gaggaggagg aggaggaggc ggggccagg cggccgagct c 41

<210> SEQ ID NO 41
<211> LENGTH: 21
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence

<220> FEATURE:
<223> OTHER INFORMATION: Synthetic PCR Primer

<400> SEQUENCE: 41
ggccatggct gggtgggcag c 21

<210> SEQ ID NO 42
<211> LENGTH: 42
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence

<220> FEATURE:
<223> OTHER INFORMATION: Synthetic PCR Primer

<400> SEQUENCE: 42
gcagagccca aatcttgtga cactagtggc caggccggcc ag 42

<210> SEQ ID NO 43
<211> LENGTH: 41
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence

<220> FEATURE:
<223> OTHER INFORMATION: Synthetic PCR Primer

<400> SEQUENCE: 43
gaggaggagg aggaggagcc tggccggcct ggccactagt g 41
```

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## UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

Page 12 of 37

PATENT NO. : 7,087,409 B2

APPLICATION NO.: 10/078,757

ISSUE DATE : August 8, 2006

INVENTOR(S) : Carlos F. Barbas, III et al.

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

<210> SEQ ID NO 44  
<211> LENGTH: 130  
<212> TYPE: PRT  
<213> ORGANISM: Mus Musculus

<400> SEQUENCE: 44  
Leu Glu Glu Ser Gly Gly Leu Val Lys Pro Gly Gly Ser Leu Lys  
1 5 10 15  
Leu Ser Cys Ala Ala Ser Gly Phe Ala Phe Ser Ser Tyr Asp Met Ser  
20 25 30  
Trp Val Arg Gln Ile Pro Glu Lys Arg Leu Glu Trp Val Ala Lys Val  
35 40 45  
Ser Ser Gly Gly Gly Ser Thr Tyr Tyr Leu Asp Thr Val Gln Gly Arg  
50 55 60  
Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Thr Leu Tyr Leu Gln Met  
65 70 75 80  
Ser Ser Leu Asn Ser Glu Asp Thr Ala Met Tyr Tyr Cys Ala Arg His  
85 90 95  
Asn Tyr Gly Ser Phe Ala Tyr Trp Gly Gln Gly Thr Leu Val Thr Val  
100 105 110  
Ser Ala Ala Lys Thr Thr Pro Pro Ser Val Tyr Pro Leu Ala Pro Gly  
115 120 125  
Ser Ala  
130

<210> SEQ ID NO 45  
<211> LENGTH: 109  
<212> TYPE: PRT  
<213> ORGANISM: Mus Musculus

<400> SEQUENCE: 45  
Glu Leu Val Met Thr Gln Thr Pro Ala Thr Leu Ser Val Thr Pro Gly  
1 5 10 15  
Asp Ser Val Ser Leu Ser Cys Arg Ala Ser Gln Ser Ile Ser Asn His  
20 25 30  
Leu His Trp Tyr Gln Gln Lys Ser His Glu Ser Pro Arg Leu Leu Ile  
35 40 45  
Lys Tyr Ala Ser Gln Ser Ile Ser Gly Ile Pro Ser Arg Phe Ser Gly  
50 55 60

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## UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

Page 13 of 37

PATENT NO. : 7,087,409 B2  
APPLICATION NO.: 10/078,757  
ISSUE DATE : August 8, 2006  
INVENTOR(S) : Carlos F. Barbas, III et al.

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

```
Ser Gly Ser Gly Thr Asp Phe Thr Leu Ser Ile Asn Ser Val Glu Thr
65          70          75          80
Glu Asp Phe Gly Met Tyr Phe Cys Gln Gln Ser Asn Ser Trp Pro His
      85          90          95
Thr Phe Gly Gly Thr Lys Leu Glu Ile Lys Arg Ala
      100          105
```

<210> SEQ ID NO 46  
<211> LENGTH: 57  
<212> TYPE: DNA  
<213> ORGANISM: Artificial Sequence

<220> FEATURE:  
<223> OTHER INFORMATION: Synthetic PCR Primer

<221> NAME/KEY: misc\_feature  
<222> LOCATION: (1)...(57)  
<223> OTHER INFORMATION: n= A, T, C, or G

<400> SEQUENCE: 46  
ggccccctgg ccaaacgtgt gaggmnnmnn mnnmnnctgt tggcagtaat acactgc 57

<210> SEQ ID NO 47  
<211> LENGTH: 23  
<212> TYPE: DNA  
<213> ORGANISM: Artificial Sequence

<220> FEATURE:  
<223> OTHER INFORMATION: Synthetic PCR Primer

<400> SEQUENCE: 47  
cctcaccgtt tggccagggg acc 23

<210> SEQ ID NO 48  
<211> LENGTH: 21  
<212> TYPE: DNA  
<213> ORGANISM: Artificial Sequence

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## UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

Page 14 of 37

PATENT NO. : 7,087,409 B2  
APPLICATION NO.: 10/078,757  
ISSUE DATE : August 8, 2006  
INVENTOR(S) : Carlos F. Barbas, III et al.

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

```
<220> FEATURE:
<223> OTHER INFORMATION: Synthetic PCR Primer

<400> SEQUENCE: 48
agaagcgtag tccggaacgt c 21

<210> SEQ ID NO 49
<211> LENGTH: 109
<212> TYPE: PRT
<213> ORGANISM: Artificial Sequence

<220> FEATURE:
<223> OTHER INFORMATION: Hybrid mouse - human sequence

<400> SEQUENCE: 49
Glu Leu Val Met Thr Gln Ser Pro Glu Phe Gln Ser Val Thr Pro Lys
 1             5             10             15
Glu Thr Val Thr Ile Thr Cys Arg Ala Ser Gln Asp Ile Gly Thr Ser
 20             25             30
Leu His Trp Tyr Gln Gln Lys Pro Gly Gln Ser Pro Lys Leu Leu Ile
 35             40             45
Lys Tyr Ala Ser Gln Pro Val Phe Gly Val Pro Ser Arg Phe Arg Gly
 50             55             60
Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Tyr Ser Leu Glu Ala
 65             70             75             80
Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Ser Asn Ser Trp Pro His
 85             90             95
Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys Arg Thr
100             105

<210> SEQ ID NO 50
<211> LENGTH: 118
<212> TYPE: PRT
<213> ORGANISM: Artificial Sequence

<220> FEATURE:
<223> OTHER INFORMATION: Hybrid mouse - human sequence

<400> SEQUENCE: 50
```

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## UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

Page 15 of 37

PATENT NO. : 7,087,409 B2

APPLICATION NO.: 10/078,757

ISSUE DATE : August 8, 2006

INVENTOR(S) : Carlos F. Barbas, III et al.

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

```
Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Gln
 1      5      10      15
Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Ala Ser Ile Ser Arg Gly
 20      25      30
Gly Tyr Tyr Trp Ser Trp Ile Arg Gln Tyr Pro Gly Lys Gly Leu Glu
 35      40      45
Trp Ile Gly Tyr Ile His His Ser Gly Ser Thr Tyr Tyr Asn Pro Ser
 50      55      60
Leu Lys Ser Arg Val Thr Ile Ala Ile Asp Thr Ser Lys Asn Gln Leu
 65      70      75      80
Ser Leu Arg Leu Thr Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr
 85      90      95
Cys Ala Arg His Asn Tyr Gly Ser Phe Ala Tyr Trp Gly Gln Gly Thr
 100      105      110
Leu Val Thr Val Ser Ser
 115
```

<210> SEQ ID NO 51  
<211> LENGTH: 118  
<212> TYPE: PRT  
<213> ORGANISM: Artificial Sequence

<220> FEATURE:  
<223> OTHER INFORMATION: Hybrid mouse - human sequence

```
<400> SEQUENCE: 51
Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Gln
 1      5      10      15
Thr Leu Phe Leu Thr Cys Thr Val Ser Gly Gly Ser Ile Ser Ser Gly
 20      25      30
Gly Tyr Tyr Trp Ser Trp Ile Arg His His Pro Gly Lys Gly Leu Glu
 35      40      45
Trp Ile Gly Tyr Ile His His Arg Ala Ala Pro Tyr Tyr Asn Pro Ser
 50      55      60
Leu Lys Ser Arg Val Thr Ile Ser Val Asp Thr Ser Arg Asn Gln Ile
 65      70      75      80
Ser Leu Lys Leu Arg Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr
 85      90      95
```

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## UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

Page 16 of 37

PATENT NO. : 7,087,409 B2  
APPLICATION NO.: 10/078,757  
ISSUE DATE : August 8, 2006  
INVENTOR(S) : Carlos F. Barbas, III et al.

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

```
Cys Ala Arg His Asn Tyr Gly Ser Phe Ala Tyr Trp Gly Gln Gly Thr
      100      105      110
Leu Val Thr Val Ser Ser
      115
```

<210> SEQ ID NO 52  
<211> LENGTH: 118  
<212> TYPE: PRT  
<213> ORGANISM: Artificial Sequence

<220> FEATURE:  
<223> OTHER INFORMATION: Hybrid mouse - human sequence

```
<400> SEQUENCE: 52
Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Glu
 1          5          10          15
Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Gly Ser Ile Ser Ser Gly
      20      25      30
Gly Tyr Tyr Trp Ser Trp Ile Arg Gln His Pro Gly Lys Gly Leu Glu
      35      40      45
Trp Ile Gly Tyr Ile His His Ser Ala Gly Thr Tyr Tyr Asn Pro Ser
      50      55      60
Leu Lys Ser Arg Val Thr Met Ser Val Asp Thr Ser Lys Asn Gln Leu
      65      70      75      80
Ser Leu Lys Leu Thr Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr
      85      90      95
Cys Ala Arg His Asn Tyr Gly Ser Phe Ala Tyr Trp Gly Gln Gly Thr
      100      105      110
Leu Val Thr Val Ser Ser
      115
```

<210> SEQ ID NO 53  
<211> LENGTH: 118  
<212> TYPE: PRT  
<213> ORGANISM: Artificial Sequence

<220> FEATURE:  
<223> OTHER INFORMATION: Hybrid mouse - human sequence

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## UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

Page 17 of 37

PATENT NO. : 7,087,409 B2

APPLICATION NO.: 10/078,757

ISSUE DATE : August 8, 2006

INVENTOR(S) : Carlos F. Barbas, III et al.

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

<400> SEQUENCE: 53  
Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Glu  
1 5 10 15  
Thr Leu Ser Leu Thr Cys Ser Val Ser Gly Gly Ser Ile Ser Ser Gly  
20 25 30  
Gly Tyr Tyr Trp Ser Trp Ile Arg His His Pro Gly Lys Gly Leu Glu  
35 40 45  
Trp Ile Gly Tyr Ile His His Ser Ala Gly Thr Tyr Tyr Asn Pro Ser  
50 55 60  
Leu Lys Ser Arg Val Thr Met Ser Ala Asp Thr Ser Lys Asn Gln Leu  
65 70 75 80  
Ser Leu Lys Leu Ala Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr  
85 90 95  
Cys Ala Arg His Asn Tyr Gly Ser Phe Ala Tyr Trp Gly Gln Gly Thr  
100 105 110  
Leu Val Thr Val Ser Ser  
115

<210> SEQ ID NO 54  
<211> LENGTH: 117  
<212> TYPE: PRT  
<213> ORGANISM: Artificial Sequence

<220> FEATURE:  
<223> OTHER INFORMATION: Hybrid mouse - human sequence

<400> SEQUENCE: 54  
Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Arg Lys Pro Gly Ser  
1 5 10 15  
Ser Val Arg Val Ser Cys Lys Ala Ser Gly Gly Thr Phe Ser Gly Phe  
20 25 30  
Ala Val Ser Trp Val Arg Gln Ala Pro Gly Gln Arg Phe Glu Trp Leu  
35 40 45  
Gly Gly Ile Val Ala Ser Leu Gly Ser Thr Asp Tyr Ala Gln Lys Phe  
50 55 60  
Gln Asp Lys Leu Thr Ile Thr Val Asp Glu Ser Thr Ala Thr Val Tyr  
65 70 75 80  
Met Glu Met Arg Asn Leu Arg Ser Asp Asp Thr Ala Val Tyr Tyr Cys  
85 90 95

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## UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

Page 18 of 37

PATENT NO. : 7,087,409 B2  
APPLICATION NO.: 10/078,757  
ISSUE DATE : August 8, 2006  
INVENTOR(S) : Carlos F. Barbas, III et al.

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Ala Arg His Asn Tyr Gly Ser Phe Ala Tyr Trp Gly Gln Gly Thr Leu.  
100 105 110  
Val Thr Val Ser Ser  
115

<210> SEQ ID NO 55  
<211> LENGTH: 109  
<212> TYPE: PRT  
<213> ORGANISM: Artificial Sequence

<220> FEATURE:  
<223> OTHER INFORMATION: Hybrid mouse - human sequence

<400> SEQUENCE: 55  
Glu Leu Val Met Thr Gln Ser Pro Glu Phe Gln Ser Val Thr Pro Lys  
1 5 10 15  
Glu Thr Val Thr Ile Thr Cys Arg Ala Ser Gln Asp Ile Gly Asn Ser  
20 25 30  
Leu His Trp Tyr Gln Gln Lys Pro Gly Gln Ser Pro Lys Leu Leu Ile  
35 40 45  
Lys Tyr Ala Ser Gln Pro Val Phe Gly Val Pro Ser Arg Phe Arg Gly  
50 55 60  
Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro  
65 70 75 80  
Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Ser Asn Ser Trp Pro His  
85 90 95  
Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys Arg Thr  
100 105

<210> SEQ ID NO 56  
<211> LENGTH: 117  
<212> TYPE: PRT  
<213> ORGANISM: Homo Sapiens

<400> SEQUENCE: 56  
Glu Val Gln Leu Glu Glu Ser Gly Gly Gly Leu Val Lys Pro Gly Gly  
1 5 10 15

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## UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

Page 19 of 37

PATENT NO. : 7,087,409 B2  
APPLICATION NO.: 10/078,757  
ISSUE DATE : August 8, 2006  
INVENTOR(S) : Carlos F. Barbas, III et al.

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

```
Ser Leu Lys Leu Ser Cys Ala Ala Ser Gly Phe Ala Phe Ser Ser Tyr
      20                25                30
Asp Met Ser Trp Val Arg Gln Ile Pro Glu Lys Arg Leu Glu Trp Val
      35                40                45
Ala Lys Val Ser Ser Gly Gly Gly Ser Thr Tyr Tyr Leu Asp Thr Val
      50                55                60
Gln Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Thr Leu Tyr
      65                70                75                80
Leu Gln Met Ser Ser Leu Asn Ser Glu Asp Thr Ala Met Tyr Tyr Cys
      85                90                95
Ala Arg His Asn Tyr Gly Ser Phe Ala Tyr Trp Gly Gln Gly Thr Leu
      100               105               110
Val Thr Val Ser Ala
      115
```

<210> SEQ ID NO 57  
<211> LENGTH: 4  
<212> TYPE: PRT  
<213> ORGANISM: Homo Sapiens

<400> SEQUENCE: 57  
Glu Arg Ala Thr  
1

<210> SEQ ID NO 58  
<211> LENGTH: 4  
<212> TYPE: PRT  
<213> ORGANISM: Homo Sapiens

<400> SEQUENCE: 58  
Glu Arg Gly Ser  
1

<210> SEQ ID NO 59  
<211> LENGTH: 5  
<212> TYPE: PRT  
<213> ORGANISM: Homo Sapiens

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## UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

Page 20 of 37

PATENT NO. : 7,087,409 B2  
APPLICATION NO.: 10/078,757  
ISSUE DATE : August 8, 2006  
INVENTOR(S) : Carlos F. Barbas, III et al.

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

<400> SEQUENCE: 59  
Ser Ser Thr Leu Ala  
1 5

<210> SEQ ID NO 60  
<211> LENGTH: 5  
<212> TYPE: PRT  
<213> ORGANISM: Homo Sapiens

<400> SEQUENCE: 60  
Ser Ser Phe Leu Ala  
1 5

<210> SEQ ID NO 61  
<211> LENGTH: 7  
<212> TYPE: PRT  
<213> ORGANISM: Homo Sapiens

<400> SEQUENCE: 61  
Val Thr Ser Ser Tyr Leu Ala  
1 5

<210> SEQ ID NO 62  
<211> LENGTH: 4  
<212> TYPE: PRT  
<213> ORGANISM: Homo Sapiens

<400> SEQUENCE: 62  
Pro Gly Gln Ala  
1

<210> SEQ ID NO 63  
<211> LENGTH: 4  
<212> TYPE: PRT  
<213> ORGANISM: Homo Sapiens

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## UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

Page 21 of 37

PATENT NO. : 7,087,409 B2  
APPLICATION NO.: 10/078,757  
ISSUE DATE : August 8, 2006  
INVENTOR(S) : Carlos F. Barbas, III et al.

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

<400> SEQUENCE: 63  
Pro Gly Lys Ala  
1

<210> SEQ ID NO 64  
<211> LENGTH: 4  
<212> TYPE: PRT  
<213> ORGANISM: Homo Sapiens

<400> SEQUENCE: 64  
Ser Arg Ala Thr  
1

<210> SEQ ID NO 65  
<211> LENGTH: 8  
<212> TYPE: PRT  
<213> ORGANISM: Mus Musculus

<400> SEQUENCE: 65  
Arg Ala Ser Gln Ser Ile Ser Asn  
1 5

<210> SEQ ID NO 66  
<211> LENGTH: 8  
<212> TYPE: PRT  
<213> ORGANISM: Mus Musculus

<400> SEQUENCE: 66  
Lys Tyr Ala Ser Gln Ser Ile Ser  
1 5

<210> SEQ ID NO 67  
<211> LENGTH: 8  
<212> TYPE: PRT  
<213> ORGANISM: Homo Sapiens

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## UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

Page 22 of 37

PATENT NO. : 7,087,409 B2  
APPLICATION NO.: 10/078,757  
ISSUE DATE : August 8, 2006  
INVENTOR(S) : Carlos F. Barbas, III et al.

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

<400> SEQUENCE: 67  
Arg Ala Ser Gln Asp Ile Gly Thr  
1 5

<210> SEQ ID NO 68  
<211> LENGTH: 8  
<212> TYPE: PRT  
<213> ORGANISM: Homo Sapiens

<400> SEQUENCE: 68  
Lys Tyr Ala Ser Gln Pro Val Phe  
1 5

<210> SEQ ID NO 69  
<211> LENGTH: 8  
<212> TYPE: PRT  
<213> ORGANISM: Homo Sapiens

<400> SEQUENCE: 69  
Arg Ala Ser Gln Asp Ile Gly Asn  
1 5

<210> SEQ ID NO 70  
<211> LENGTH: 8  
<212> TYPE: PRT  
<213> ORGANISM: Homo Sapiens

<400> SEQUENCE: 70  
Arg Ala Ser Gln Ser Ile Gly Trp  
1 5

<210> SEQ ID NO 71  
<211> LENGTH: 8  
<212> TYPE: PRT  
<213> ORGANISM: Homo Sapiens

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## UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

Page 23 of 37

PATENT NO. : 7,087,409 B2  
APPLICATION NO.: 10/078,757  
ISSUE DATE : August 8, 2006  
INVENTOR(S) : Carlos F. Barbas, III et al.

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

<400> SEQUENCE: 71  
Lys Tyr Ala Ser Gln Ser Ile Ser  
1 5

<210> SEQ ID NO 72  
<211> LENGTH: 8  
<212> TYPE: PRT  
<213> ORGANISM: Homo Sapiens

<400> SEQUENCE: 72  
Arg Ser Ser Gln Ser Ile Asn Ile  
1 5

<210> SEQ ID NO 73  
<211> LENGTH: 8  
<212> TYPE: PRT  
<213> ORGANISM: Homo Sapiens

<400> SEQUENCE: 73  
Tyr His Ala Ser Lys Arg Ala Ser  
1 5

<210> SEQ ID NO 74  
<211> LENGTH: 9  
<212> TYPE: PRT  
<213> ORGANISM: Homo Sapiens

<400> SEQUENCE: 74  
Arg Ala Ser Gln Ser Val Ser Asn Asn  
1 5

<210> SEQ ID NO 75  
<211> LENGTH: 8  
<212> TYPE: PRT  
<213> ORGANISM: Homo Sapiens

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## UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

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PATENT NO. : 7,087,409 B2  
APPLICATION NO.: 10/078,757  
ISSUE DATE : August 8, 2006  
INVENTOR(S) : Carlos F. Barbas, III et al.

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

<400> SEQUENCE: 75  
Tyr Arg Ala Ser Ser Arg Ala Thr  
1 5

<210> SEQ ID NO 76  
<211> LENGTH: 13  
<212> TYPE: PRT  
<213> ORGANISM: Homo Sapiens

<400> SEQUENCE: 76  
Arg Ser Ser Gln Ser Leu Val Tyr Ser Asp Gly Asn Thr  
1 5 10

<210> SEQ ID NO 77  
<211> LENGTH: 8  
<212> TYPE: PRT  
<213> ORGANISM: Homo Sapiens

<400> SEQUENCE: 77  
Tyr Lys Val Ser Asn Arg Asp Ser  
1 5

<210> SEQ ID NO 78  
<211> LENGTH: 13  
<212> TYPE: PRT  
<213> ORGANISM: Homo Sapiens

<400> SEQUENCE: 78  
Tyr Ala Ser Gln Ser Leu Val Tyr Thr Asp Gly Asn Thr  
1 5 10

<210> SEQ ID NO 79  
<211> LENGTH: 8  
<212> TYPE: PRT  
<213> ORGANISM: Homo Sapiens

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## UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

Page 25 of 37

PATENT NO. : 7,087,409 B2  
APPLICATION NO.: 10/078,757  
ISSUE DATE : August 8, 2006  
INVENTOR(S) : Carlos F. Barbas, III et al.

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

<400> SEQUENCE: 79  
Tyr Met Val Ser Asn Arg Asp Ser  
1 5

<210> SEQ ID NO 80  
<211> LENGTH: 23  
<212> TYPE: PRT  
<213> ORGANISM: Mus Musculus

<400> SEQUENCE: 80  
Glu Leu Val Met Thr Gln Thr Pro Ala Thr Leu Ser Val Thr Pro Gly  
1 5 10 15  
Asp Ser Val Ser Leu Ser Cys  
20

<210> SEQ ID NO 81  
<211> LENGTH: 23  
<212> TYPE: PRT  
<213> ORGANISM: Homo Sapiens

<400> SEQUENCE: 81  
Glu Leu Val Met Thr Gln Ser Pro Glu Phe Gln Ser Val Thr Pro Lys  
1 5 10 15  
Glu Thr Val Thr Ile Thr Cys  
20

<210> SEQ ID NO 82  
<211> LENGTH: 11  
<212> TYPE: PRT  
<213> ORGANISM: Mus Musculus

<400> SEQUENCE: 82  
Arg Ala Ser Gln Ser Ile Ser Asn His Leu His  
1 5 10

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## UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

Page 26 of 37

PATENT NO. : 7,087,409 B2  
APPLICATION NO.: 10/078,757  
ISSUE DATE : August 8, 2006  
INVENTOR(S) : Carlos F. Barbas, III et al.

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

<210> SEQ ID NO 83  
<211> LENGTH: 11  
<212> TYPE: PRT  
<213> ORGANISM: Homo Sapiens

<400> SEQUENCE: 83  
Arg Ala Ser Gln Asp Ile Gly Thr Ser Leu His  
1 5 10

<210> SEQ ID NO 84  
<211> LENGTH: 11  
<212> TYPE: PRT  
<213> ORGANISM: Homo Sapiens

<400> SEQUENCE: 84  
Arg Ala Ser Gln Asp Ile Gly Asn Ser Leu His  
1 5 10

<210> SEQ ID NO 85  
<211> LENGTH: 15  
<212> TYPE: PRT  
<213> ORGANISM: Mus Musculus

<400> SEQUENCE: 85  
Trp Tyr Gln Gln Lys Ser His Glu Ser Pro Arg Leu Leu Ile Lys  
1 5 10 15

<210> SEQ ID NO 86  
<211> LENGTH: 15  
<212> TYPE: PRT  
<213> ORGANISM: Homo Sapiens

<400> SEQUENCE: 86  
Trp Tyr Gln Gln Lys Pro Gly Gln Ser Pro Lys Leu Leu Ile Lys  
1 5 10 15

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## UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

Page 27 of 37

PATENT NO. : 7,087,409 B2  
APPLICATION NO.: 10/078,757  
ISSUE DATE : August 8, 2006  
INVENTOR(S) : Carlos F. Barbas, III et al.

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

<210> SEQ ID NO 87  
<211> LENGTH: 7  
<212> TYPE: PRT  
<213> ORGANISM: Mus Musculus

<400> SEQUENCE: 87  
Tyr Ala Ser Gln Ser Ile Ser  
1 5

<210> SEQ ID NO 88  
<211> LENGTH: 7  
<212> TYPE: PRT  
<213> ORGANISM: Homo Sapiens

<400> SEQUENCE: 88  
Tyr Ala Ser Gln Pro Val Phe  
1 5

<210> SEQ ID NO 89  
<211> LENGTH: 32  
<212> TYPE: PRT  
<213> ORGANISM: Mus Musculus

<400> SEQUENCE: 89  
Gly Ile Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr  
1 5 10 15  
Leu Ser Ile Asn Ser Val Glu Thr Glu Asp Phe Gly Met Tyr Phe Cys  
20 25 30

<210> SEQ ID NO 90  
<211> LENGTH: 32  
<212> TYPE: PRT  
<213> ORGANISM: Homo Sapiens

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## UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

Page 28 of 37

PATENT NO. : 7,087,409 B2  
APPLICATION NO.: 10/078,757  
ISSUE DATE : August 8, 2006  
INVENTOR(S) : Carlos F. Barbas, III et al.

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

<400> SEQUENCE: 90  
Gly Val Pro Ser Arg Phe Arg Gly Ser Gly Ser Gly Thr Asp Phe Thr  
1 5 10 15  
Leu Thr Ile Tyr Ser Leu Glu Ala Glu Asp Phe Ala Val Tyr Tyr Cys  
20 25 30

<210> SEQ ID NO 91  
<211> LENGTH: 32  
<212> TYPE: PRT  
<213> ORGANISM: Homo Sapiens

<400> SEQUENCE: 91  
Gly Val Pro Ser Arg Phe Arg Gly Ser Gly Ser Gly Thr Asp Phe Thr  
1 5 10 15  
Leu Thr Ile Ser Arg Leu Glu Pro Glu Asp Phe Ala Val Tyr Tyr Cys  
20 25 30

<210> SEQ ID NO 92  
<211> LENGTH: 12  
<212> TYPE: PRT  
<213> ORGANISM: Mus Musculus

<400> SEQUENCE: 92  
Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys Arg Ala  
1 5 10

<210> SEQ ID NO 93  
<211> LENGTH: 12  
<212> TYPE: PRT  
<213> ORGANISM: Homo Sapiens

<400> SEQUENCE: 93  
Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys Arg Thr  
1 5 10

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Page 29 of 37

PATENT NO. : 7,087,409 B2  
APPLICATION NO.: 10/078,757  
ISSUE DATE : August 8, 2006  
INVENTOR(S) : Carlos F. Barbas, III et al.

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

<210> SEQ ID NO 94  
<211> LENGTH: 30  
<212> TYPE: PRT  
<213> ORGANISM: Mus Musculus

<400> SEQUENCE: 94  
Glu Val Gln Leu Glu Ser Gly Gly Gly Leu Val Lys Pro Gly Gly  
1 5 10 15  
Ser Leu Lys Leu Ser Cys Ala Ala Ser Gly Phe Ala Phe Ser  
20 25 30

<210> SEQ ID NO 95  
<211> LENGTH: 30  
<212> TYPE: PRT  
<213> ORGANISM: Homo Sapiens

<400> SEQUENCE: 95  
Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Arg Lys Pro Gly Ser  
1 5 10 15  
Ser Val Arg Val Ser Cys Lys Ala Ser Gly Gly Thr Phe Ser  
20 25 30

<210> SEQ ID NO 96  
<211> LENGTH: 30  
<212> TYPE: PRT  
<213> ORGANISM: Homo Sapiens

<400> SEQUENCE: 96  
Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Gln  
1 5 10 15  
Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Ala Ser Ile Ser  
20 25 30

<210> SEQ ID NO 97  
<211> LENGTH: 30  
<212> TYPE: PRT  
<213> ORGANISM: Homo Sapiens

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## UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

Page 30 of 37

PATENT NO. : 7,087,409 B2  
APPLICATION NO.: 10/078,757  
ISSUE DATE : August 8, 2006  
INVENTOR(S) : Carlos F. Barbas, III et al.

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

<400> SEQUENCE: 97  
Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Gln  
1 5 10 15  
Thr Leu Phe Leu Thr Cys Thr Val Ser Gly Gly Ser Ile Ser  
20 25 30

<210> SEQ ID NO 98  
<211> LENGTH: 30  
<212> TYPE: PRT  
<213> ORGANISM: Homo Sapiens

<400> SEQUENCE: 98  
Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Glu  
1 5 10 15  
Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Gly Ser Ile Ser  
20 25 30

<210> SEQ ID NO 99  
<211> LENGTH: 30  
<212> TYPE: PRT  
<213> ORGANISM: Homo Sapiens

<400> SEQUENCE: 99  
Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Glu  
1 5 10 15  
Thr Leu Ser Leu Thr Cys Ser Val Ser Gly Gly Ser Ile Ser  
20 25 30

<210> SEQ ID NO 100  
<211> LENGTH: 5  
<212> TYPE: PRT  
<213> ORGANISM: Mus Musculus

<400> SEQUENCE: 100  
Ser Tyr Asp Met Ser  
1 5

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## UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

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PATENT NO. : 7,087,409 B2  
APPLICATION NO.: 10/078,757  
ISSUE DATE : August 8, 2006  
INVENTOR(S) : Carlos F. Barbas, III et al.

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

<210> SEQ ID NO 101  
<211> LENGTH: 5  
<212> TYPE: PRT  
<213> ORGANISM: Homo Sapiens

<400> SEQUENCE: 101  
Gly Phe Ala Val Ser  
1 5

<210> SEQ ID NO 102  
<211> LENGTH: 7  
<212> TYPE: PRT  
<213> ORGANISM: Homo Sapiens

<400> SEQUENCE: 102  
Arg Gly Gly Tyr Tyr Trp Ser  
1 5

<210> SEQ ID NO 103  
<211> LENGTH: 7  
<212> TYPE: PRT  
<213> ORGANISM: Homo Sapiens

<400> SEQUENCE: 103  
Ser Gly Gly Tyr Tyr Trp Ser  
1 5

<210> SEQ ID NO 104  
<211> LENGTH: 14  
<212> TYPE: PRT  
<213> ORGANISM: Mus Musculus

<400> SEQUENCE: 104  
Trp Val Arg Gln Ile Pro Glu Lys Arg Leu Glu Trp Val Ala  
1 5 10

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## UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

Page 32 of 37

PATENT NO. : 7,087,409 B2  
APPLICATION NO.: 10/078,757  
ISSUE DATE : August 8, 2006  
INVENTOR(S) : Carlos F. Barbas, III et al.

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

<210> SEQ ID NO 105  
<211> LENGTH: 14  
<212> TYPE: PRT  
<213> ORGANISM: Homo Sapiens  
  
<400> SEQUENCE: 105  
Trp Val Arg Gln Ala Pro Gly Gln Arg Phe Glu Trp Leu Gly  
1 5 10

<210> SEQ ID NO 106  
<211> LENGTH: 14  
<212> TYPE: PRT  
<213> ORGANISM: Homo Sapiens  
  
<400> SEQUENCE: 106  
Trp Ile Arg Gln Tyr Pro Gly Lys Gly Leu Glu Trp Ile Gly  
1 5 10

<210> SEQ ID NO 107  
<211> LENGTH: 14  
<212> TYPE: PRT  
<213> ORGANISM: Homo Sapiens  
  
<400> SEQUENCE: 107  
Trp Ile Arg His His Pro Gly Lys Gly Leu Glu Trp Ile Gly  
1 5 10

<210> SEQ ID NO 108  
<211> LENGTH: 14  
<212> TYPE: PRT  
<213> ORGANISM: Homo Sapiens  
  
<400> SEQUENCE: 108  
Trp Ile Arg Gln His Pro Gly Lys Gly Leu Glu Trp Ile Gly  
1 5 10

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## UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

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PATENT NO. : 7,087,409 B2  
APPLICATION NO.: 10/078,757  
ISSUE DATE : August 8, 2006  
INVENTOR(S) : Carlos F. Barbas, III et al.

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

<210> SEQ ID NO 109  
<211> LENGTH: 17  
<212> TYPE: PRT  
<213> ORGANISM: Homo Sapiens

<400> SEQUENCE: 109  
Gly Ile Val Ala Ser Leu Gly Ser Thr Asp Tyr Ala Gln Lys Phe Gln  
1 5 10 15  
Asp

<210> SEQ ID NO 110  
<211> LENGTH: 16  
<212> TYPE: PRT  
<213> ORGANISM: Homo Sapiens

<400> SEQUENCE: 110  
Tyr Ile His His Ser Gly Ser Thr Tyr Tyr Asn Pro Ser Leu Lys Ser  
1 5 10 15

<210> SEQ ID NO 111  
<211> LENGTH: 16  
<212> TYPE: PRT  
<213> ORGANISM: Homo Sapiens

<400> SEQUENCE: 111  
Tyr Ile His His Arg Ala Ala Pro Tyr Tyr Asn Pro Ser Leu Lys Ser  
1 5 10 15

<210> SEQ ID NO 112  
<211> LENGTH: 16  
<212> TYPE: PRT  
<213> ORGANISM: Homo Sapiens

<400> SEQUENCE: 112  
Tyr Ile His His Ser Ala Gly Thr Tyr Tyr Asn Pro Ser Leu Lys Ser  
1 5 10 15

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## UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

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PATENT NO. : 7,087,409 B2  
APPLICATION NO.: 10/078,757  
ISSUE DATE : August 8, 2006  
INVENTOR(S) : Carlos F. Barbas, III et al.

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

<210> SEQ ID NO 113  
<211> LENGTH: 32  
<212> TYPE: PRT  
<213> ORGANISM: Mus Musculus

<400> SEQUENCE: 113  
Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Thr Leu Tyr Leu Gln  
1 5 10 15  
Met Ser Ser Leu Asn Ser Glu Asp Thr Ala Met Tyr Tyr Cys Ala Arg  
20 25 30

<210> SEQ ID NO 114  
<211> LENGTH: 32  
<212> TYPE: PRT  
<213> ORGANISM: Homo Sapiens

<400> SEQUENCE: 114  
Lys Leu Thr Ile Thr Val Asp Glu Ser Thr Ala Thr Val Tyr Met Glu  
1 5 10 15  
Met Arg Asn Leu Arg Ser Asp Asp Thr Ala Val Tyr Tyr Cys Ala Arg  
20 25 30

<210> SEQ ID NO 115  
<211> LENGTH: 32  
<212> TYPE: PRT  
<213> ORGANISM: Homo Sapiens

<400> SEQUENCE: 115  
Arg Val Thr Ile Ala Ile Asp Thr Ser Lys Asn Gln Leu Ser Leu Arg  
1 5 10 15  
Leu Thr Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr Cys Ala Arg  
20 25 30

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## UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

Page 35 of 37

PATENT NO. : 7,087,409 B2

APPLICATION NO.: 10/078,757

ISSUE DATE : August 8, 2006

INVENTOR(S) : Carlos F. Barbas, III et al.

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

<210> SEQ ID NO 116  
<211> LENGTH: 32  
<212> TYPE: PRT  
<213> ORGANISM: Homo Sapiens

<400> SEQUENCE: 116  
Arg Val Thr Ile Ser Val Asp Thr Ser Arg Asn Gln Ile Ser Leu Lys  
1 5 10 15  
Leu Arg Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr Cys Ala Arg  
20 25 30

<210> SEQ ID NO 117  
<211> LENGTH: 32  
<212> TYPE: PRT  
<213> ORGANISM: Homo Sapiens

<400> SEQUENCE: 117  
Arg Val Thr Met Ser Val Asp Thr Ser Lys Asn Gln Leu Ser Leu Lys  
1 5 10 15  
Leu Thr Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr Cys Ala Arg  
20 25 30

<210> SEQ ID NO 118  
<211> LENGTH: 32  
<212> TYPE: PRT  
<213> ORGANISM: Homo Sapiens

<400> SEQUENCE: 118  
Arg Val Thr Met Ser Ala Asp Thr Ser Lys Asn Gln Leu Ser Leu Lys  
1 5 10 15  
Leu Ala Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr Cys Ala Arg  
20 25 30

<210> SEQ ID NO 119  
<211> LENGTH: 11  
<212> TYPE: PRT  
<213> ORGANISM: Mus Musculus

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## UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

Page 36 of 37

PATENT NO. : 7,087,409 B2  
APPLICATION NO.: 10/078,757  
ISSUE DATE : August 8, 2006  
INVENTOR(S) : Carlos F. Barbas, III et al.

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

<400> SEQUENCE: 119  
Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ala  
1 5 10

<210> SEQ ID NO 120  
<211> LENGTH: 11  
<212> TYPE: PRT  
<213> ORGANISM: Homo Sapiens

<400> SEQUENCE: 120  
Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser  
1 5 10

<210> SEQ ID NO 121  
<211> LENGTH: 9  
<212> TYPE: PRT  
<213> ORGANISM: Artificial Sequence

<220> FEATURE:  
<223> OTHER INFORMATION: LCDR3 variant portion

<221> NAME/KEY: VARIANT  
<222> LOCATION: (3)...(6)  
<223> OTHER INFORMATION: Xaa = any amino acid

<400> SEQUENCE: 121  
Gln Gln Xaa Xaa Xaa Xaa Pro His Thr  
1 5

<210> SEQ ID NO 122  
<211> LENGTH: 8  
<212> TYPE: PRT  
<213> ORGANISM: Artificial Sequence

<220> FEATURE:  
<223> OTHER INFORMATION: HCDR3 variant portion

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## UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

Page 37 of 37

PATENT NO. : 7,087,409 B2  
APPLICATION NO.: 10/078,757  
ISSUE DATE : August 8, 2006  
INVENTOR(S) : Carlos F. Barbas, III et al.

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

<221> NAME/KEY: VARIANT  
<222> LOCATION: (1)...(4)  
<223> OTHER INFORMATION: Xaa = any amino acid  
  
<400> SEQUENCE: 122  
Xaa Xaa Xaa Xaa Ser Phe Ala Tyr  
1 5

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